IN THE CLAIMS

1. (currently amended) An optical device for treating an incident X-ray beam, said device comprising:

a monochromator; and

an optical element for conditioning the incident X-ray beam, the optical element including an X-ray reflective surface having a multilayer structure to produce a two-dimensional optical effect in order to adapt a beam directed towards the monochromator;

wherein said reflective surface consists of a single surface, said reflective surface being shaped according to two curvatures corresponding to two different directions in order to produce respective one-dimensional effects, wherein one of the one-dimensional effects is a collimation for limiting the divergence in the diffraction plane of the monochromator, and the other one-dimensional effect is a focusing.

2. (previously presented) The optical device according to claim 1, wherein said single reflective surface is of a multilayer type with a lateral gradient.

3. (previously presented) The optical device according to claim 1, wherein the single reflective surface comprises a depth gradient.

4. (cancelled)

5. (previously presented) The optical device according to claim 1, wherein said reflective surface has a geometry which is substantially circular in a first direction and substantially parabolic in a second direction.

6. (previously presented) The optical device according to claim 5, wherein said first direction is a saggital direction of the optical element and the second direction is a meridional direction of the optical element.

7. (previously presented) The optical device according to claim 1, wherein said reflective surface has a substantially toroidal geometry.

8. (previously presented) The optical device according to claim 1, wherein said reflective surface has a substantially paraboloidal geometry.

9. (previously presented) The optical device according to claim 1, wherein said reflective surface has a substantially ellipsoidal geometry.

10. (previously presented) The optical device according to claim 1, wherein said reflective surface is able to reflect rays of lines Cu-K or Mo-K.

11. (previously presented) The optical device according to claim 1, wherein the monochromator comprises a germanium crystal, and the optical element comprises a W/Si multilayer coating with a lateral gradient.

12. (previously presented) The optical device according to claim 1, wherein the optical element of the optical device has a length of around 2 cm, said optical device being usable with a source of X-rays having a size of around 40 microns by 40 microns in order to produce a sample spot of around 300*300 microns.

13. (cancelled)

14. (cancelled)

15. (previously presented) The optical device according to claim 1, wherein said reflective surface has a geometry defined by an open or closed curve different from a circle in a first one of the directions and substantially parabolic in a second one of the directions.

16. (previously presented) The optical device according to claim 1, wherein said reflective surface has a geometry substantially elliptical in a first one of the directions and substantially parabolic in a second one of the directions.

17. (previously presented) The optical device according to claim 1, wherein said reflecting surface has a geometry substantially parabolic in the two different directions.

18. (new) The optical device according to claim 1, wherein the reflective surface has a radius of curvature lower than 20 mm along the saggital direction of the optical element.